UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,714	06/04/2001	Morenike Awokola	FA1002 US NA	4978

23906 7590 11/17/2003

E I DU PONT DE NEMOURS AND COMPANY
LEGAL PATENT RECORDS CENTER
BARLEY MILL PLAZA 25/1128
4417 LANCASTER PIKE
WILMINGTON, DE 19805

EXAMINER	
TSOY, ELENA	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/873,714	AWOKOLA ET AL.	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10 and 13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10 and 13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 22, 2003 has been entered.

Response to Amendment

Amendment filed on September 22, 2003 has been entered. Claims 1-10, 13 are pending in the application.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. **Claims 1-6, 13** rejected under 35 U.S.C. 103(a) as being unpatentable over DE-A-197 57 082 or WO 99/26733 in view of Takeda et al (US 4,615,915).

The Examiner Note: since DE-A-197 57 082 and WO 99/26733 (in German language) and US 6,531,188 are of the same patent family, the Examiner will refer to English text of US 6,531,188.

Applicants admitted in Description of Related Art of the specification as filed that DE-A-197 57 082 discloses a multilayer coating process, in which the filler coating composition used

comprises either solely binders curable by free-radical and/or cationic polymerization, or binders curable by free-radical and/or cationic polymerization and *further chemically crosslinking binders*. Curing proceeds by means of high energy radiation. See specification, page 1, lines 26-30.

As to claims 2-4, 6, 13, DE-A-197 57 082/WO 99/26733 discloses all steps recited in claim 1 such as a) applying to *optionally* pre-coated metal or plastic surface (See column 2, lines 11-15) a surfacer coating composition for automative repair lacquering (See column 5, lines 29, 37) comprising 100 % (See column 2, lines 47-49) of a prepolymer having molecular mass of **200**-10,000 and containing on average **2** to 20 olefinic double bonds per molecule (a binder A) (See column 3, lines 6-12) and 1 to 50 wt. % of a reactive monosaturated diluent, e.g. esters of methacrylic acid (See column 3, lines 13-20) and a chemically crosslinking binder (See column 4, lines 29-40) (i.e. a *liquid* surfacer coating composition), b) curing the applied surfacer coating composition by irradiation with high energy radiation (See column 2, lines 40-49); c) applying a top coat layer comprising a color-imparting and/or special-effect-imparting base lacquer layer and a transparent clear lacquer layer, or a top coating comprising a pigmented one-layer top lacquer (See column 2, lines 17-18) to the cured filler layer and curing the top coat layer (See column 7, lines 62-65). Any two-component binder system based on a hydroxy-functional and an isocyanate-functional component, a hydroxy-functional and an anhydride component, a polyamine component and an epoxy component or a polyamine component and an acryloyl-functional component may, for example, be used as chemically cross-linking binders (See column 4, lines 32-40). *The temperatures* generated on the coating by means of the UV

irradiation (UV flash lamp) are generally sufficient to cure the additional cross-linkable binders. No separate curing operation is necessary. See column 6, lines 56-59.

DE-A-197 57 082/WO 99/26733 fails to teach that the surfacer coating composition comprises at least one compound having at least one phosphoric acid group (Claim 1) in an amount of 1-15 wt. % (Claim 5).

Takeda et al teach that phosphoric acid esters can be used for acceleration of curing a painting composition comprising epoxy-amino resin (See column 3, lines 39-43, 56-59).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used phosphoric acid esters in surfacer coating composition of DE-A-197 57 082/WO 99/26733 comprising chemically crosslinking epoxy-amino resin with the expectation of providing the desired acceleration of curing since Takeda et al teach that phosphoric acid esters can be used for acceleration of curing a painting composition comprising epoxy-amino resin.

As to claim 5, it is held that concentration limitations are obvious absent a showing of criticality. Akzo v. E.I. du Pont de Nemours 1 USPQ 2d 1704 (Fed. Cir. 1987).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have discovered the optimum or workable ranges of concentration limitations of a compound having at least one phosphoric acid group (including those of claim 5) in DE-A-197 57 082/WO 99/26733 in view of Takeda et al by routine experimentation in the absence of a showing of criticality.

3. **Claims 1-6, 9, 10, 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over DE-A-197 57 082 or WO 99/26733 in view of Richard (US 5,091,211).

As to claims 2-4, 6, 13, DE-A-197 57 082/WO 99/26733 is applied here for the same reasons as above.

DE-A-197 57 082/WO 99/26733 fails to teach that the radiation curable surfacer coating composition comprises at least one compound having at least one phosphoric acid group (Claim 1) in an amount of 1-15 wt. % (Claim 5) or a compound having phosphoric acid group and a double bond (Claim 9) such as methacryloyl-modified phosphoric acid derivative (Claim 10).

As to claims 1, 9, 10, Richard teaches that addition of a compound having phosphoric acid group and a double bond such as methacryloyl-modified phosphoric acid derivative (See column 2, lines 10-15, 37) to a radiation curable coating composition improves adhesion bond of the coating to a plastic substrate (See column 1, lines 57-60, column 2, lines 1-2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified a radiation curable surfacer coating composition of DE-A-197 57 082/WO 99/26733 by adding a compound having phosphoric acid group and a double bond such as methacryloyl-modified phosphoric acid derivative with the expectation of providing the surfacer coating composition with the desired improvement of adhesive properties of the composition toward plastic substrates, as taught by Richard.

As to claim 5, it is held that concentration limitations are obvious absent a showing of criticality. Akzo v. E.I. du Pont de Nemours 1 USPQ 2d 1704 (Fed. Cir. 1987).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have discovered the optimum or workable ranges of concentration limitations of a compound having at least one phosphoric acid group (including those of claim 5) in DE-A-197

57 082/WO 99/26733 in view of Richard by routine experimentation in the absence of a showing of criticality.

4. **Claims 7, 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over DE-A-197 57 082 or WO 99/26733 in view of Takeda et al (US 4,615,915) or Richard (US 5,091,211), and further in view of Brehm et al (US 5,596,043).

DE-A-197 57 082/WO 99/26733 in view of Takeda et al or Richard, as applied above, fails to teach that the esters of methacrylic acid are esters of cycloaliphatic alcohols (Claim 7) such as isobornyl methacrylate (Claim 8).

Brehm et al teach that monofunctional reactive thinners, such as isobornyl methacrylate (See column 5, line 59) may be used in combination with acrylic prepolymers (See column 4, lines 5-13) in a radiation curable coating composition (See column 7, lines 14-25) for coating automobile parts (See column 6, lines 33-35, 42) to provide good flow properties of the coating composition and thereby good processibility (See column 5, lines 50-53).

It is held that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). See also In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious); Ryco, Inc. v. Ag-Bag Corp., 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used methacrylates of cycloaliphatic alcohols such as isobornyl methacrylate as methacrylatereactive thinner in DE-A-197 57 082/WO 99/26733 in view of Takeda et al or

Richard for the use in automotive coatings since Brehm et al teach that monofunctional reactive thinners, such as isobornyl methacrylate is suitable for the use in a radiation curable coating composition in combination with acrylic prepolymers.

Response to Arguments

5. Applicant's arguments with respect to claims 1-10, 13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on Mo-Thur. 9:00-7:30, Mo-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for all communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

ET Tsoy

Elena Tsoy
Examiner
Art Unit 1762

November 11, 2003